

EB 80 PROPORTIONAL PRESSURE REGULATOR - A

The EB 80 proportional pressure regulator is an extremely precise and reliable component part. It is designed to regulate the pressure of a system with varying values according to the electrical control setting.

It can be inserted in any position and on all EB 80 islands.

Highly flexible, it comes in various types: for the 25/44-pin multi-pole islands, it is possible to use the analogue regulator with external M12 electrical connection, it accepts commands in Volts, mA and via RS232 protocol; in all the versions with a fieldbus, the connections and electrical controls are directly incorporated in the internal hardware/software that can be easily managed by the user in a simple and intuitive way every island and can accommodate up to 16 pressure regulators that are connected to all the protocols available for the EB 80 (also in additional islands).

An island of electronic regulators arranged in a row can be created, without necessarily requiring solenoid valves.

The "closed loop" system has a precision sensor that detects the output pressure value; the control system compares the value read with the value set in real time and two mini-solenoid valves adjust the pressure until the target value is reached.

As for the Regtronic family, in this case too, you can opt for a regulator with a screen that displays the pressure and a whole series of information including diagnostics that facilitates the configuration or a version without display where the configuration is done remotely.

As to the pneumatic system, there are two possibilities: with Local Regulation or Series Regulation. In the former case, the air taken from port 1 of the island is regulated by a quick-fit coupling with the front side in the base; in this way, several regulators can be placed in succession. In the latter case, the pressure is regulated directly at port 1 of the island, so all the valves downstream are supplied with the pressure set by the regulator. The front outlet fitting, which has an RL9 cap in this version, is still present and operational.

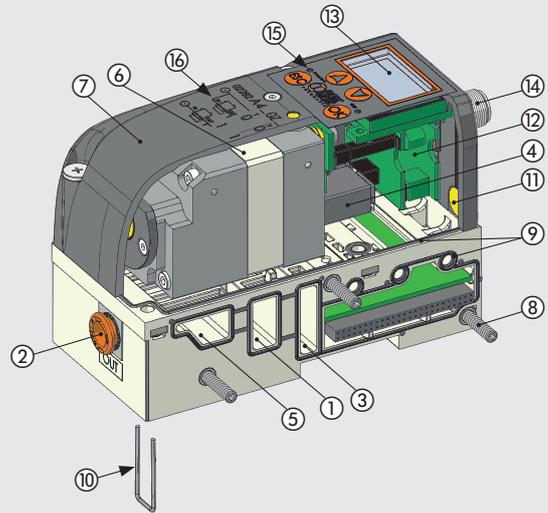


TECHNICAL DATA	LOCAL OUTPUT VERSION	SERIES CONTROL VERSION
Fluid	Filtered, unlubricated air. The air must be filtered at least 10 µm	
MIN inlet pressure	Regulation pressure + 0.5 to 1	
MAX inlet pressure	10.5	
Temperature range	from 0 to 50	
Pressure regulation range	from 0.05 to 10 (settable full scale and minimum pressure)	
Flow rate at 6.3 bar ΔP 0.5	720	850
Flow rate at 6.3 bar ΔP 1	1000	1250
Exhaust flow rate at 6.3 bar with 0.1 bar overpressure	380	450
Exhaust flow rate at 6.3 bar with 0.5 bar overpressure	800	1100
Response time	Volume [cc]	
from 6 to 7 bar	100	1000
from 7 to 6 bar	0.1	0.15
Weight	kg	0.6
Class of protection	IP 65	
Hysteresis	≤ ± 0.2% (Full scale)	
Repeatability	≤ ± 0.2% (Full scale)	
Sensitivity/Dead-band	setting range 10 to 300 mbar	
Output pressure (display version)	Accuracy	≤ ± 0.3% (Full scale)
	Unit of measurement	bar, MPa, psi
	Minimum resolution	0.01 bar - 0.001 MPa - 0.01 psi
Temperature characteristics	Max 2 mbar / °C	
Installation position	In any position	
Current input in the fieldbus version	Max 220 mA at 12VDC	
Supply voltage range analog version	VDC	12 -10% to 24 +30%
Minimum operating voltage	VDC	10.8
Maximum operating voltage	VDC	31.2
Maximum admissible voltage	VDC	32 *
Current absorption	Max 220 mA at 12VDC	
Input signal (input impedance)	Voltage	0 to 5 VDC, 0 to 10 VDC (approx. 6.3 KΩ)
	Current	4 to 20 mA (approx. 100 Ω)
	Serial ports	RS 232
	Manual	Keypad
Output signals in the analogue version	Analog voltage	0 to 10 VDC (1 VDC = 1 bar) - 1 mA max
	Analog current	4 to 20 mA (4 mA = 0 bar, 20 mA = 10 bar)
	Digital	PNP open collector output: max 24VDC 60 mA NPN open collector output: max 24VDC 60 mA
	Analog output accuracy	≤ ± 0.4% (Full scale)
Notes	The features shown refer to the static condition only. With air consumption the pressure may vary. On all analog versions you can set the parameters using the software "MWRRegtronic" downloadable from the website www.metalwork.eu ; to connect the PC to Regtronic you can use the cable code W0970513019 For more details, please refer to the User Manual.	

* IMPORTANT! Voltage greater than 32VDC will damage the system irreparably.

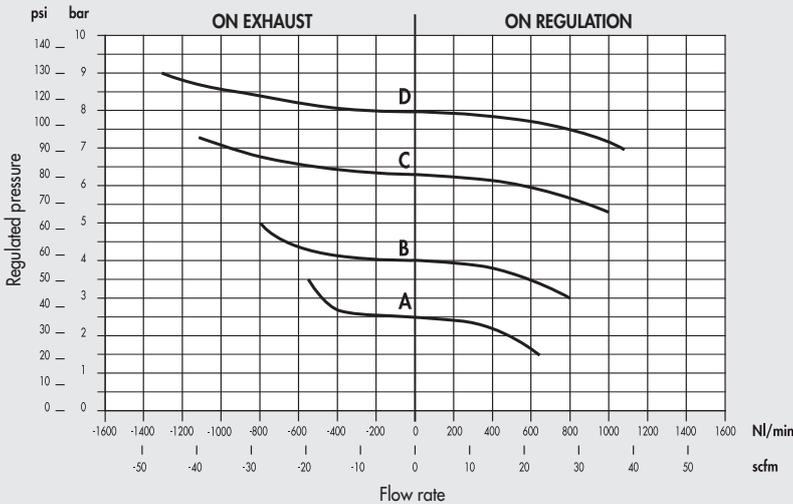
COMPONENTS

- ① PORT 1 DUCT
- ② CARTRIDGE Ø8: push-in fitting
- ③ PORT 3 DUCT
- ④ SOLENOID VALVE: 10 mm series PLT-10
- ⑤ PORT 5 DUCT
- ⑥ BODIES: aluminium
- ⑦ COVER: technopolymer
- ⑧ TIE ROD: nickel-plated brass with stainless steel grub screws
- ⑨ GASKETS: NBR
- ⑩ CLIP for securing the cartridge: stainless steel
- ⑪ Compensation DIAPHRAGM: PTFE
- ⑫ ELECTRONIC BOARDS
- ⑬ DISPLAY and keypad or cover
- ⑭ CONNECTOR M12 (for analog version)
- ⑮ INDICATOR LED
- ⑯ IDENTIFICATION of wording with laser



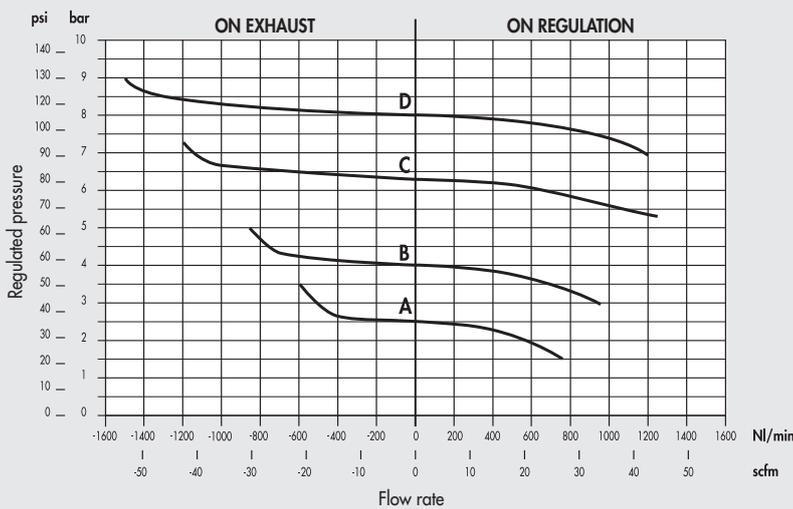
FLOW CHARTS

LOCAL OUTLET (Ø8)



A = 2.5 bar
 B = 4 bar
 C = 6.3 bar
 D = 8 bar
 Pm = 10 bar

REGULATION IN SERIES



A = 2.5 bar
 B = 4 bar
 C = 6.3 bar
 D = 8 bar
 Pm = 10 bar

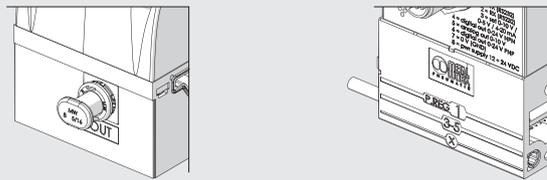
VERSIONS

PASS-THROUGH BASE – LOCAL OUTLET



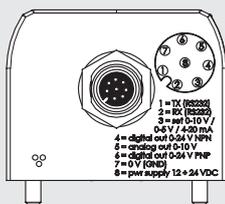
Air outlet regulated only by the front Ø8 fitting.

REGULATION IN SERIES



Air outlet adjusted to the next bases. Front outlet closed, however usable by removing the cap from the fitting.

M12 EXTERNAL ANALOGUE CONTROL (MULTI-POLE ISLANDS)

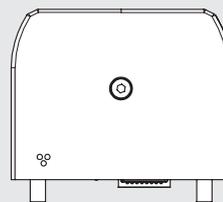


8 PIN M12x1



Pin	Signal	Description	Lead colour
1	TX	RS232	White
2	RX	RS232	Brown
3	Pressure set	0 to 10 VDC / 0 to 5 VDC 4 to 20 mA	Green
4	Digital out	NPN	Yellow
5	Analog out	Voltage version 0 to 10 VDC Current version 4 to 20 mA	Gray
6	Digital out	PNP	Pink
7	0 VDC	Power supply	Blue
8	+ VDC	Power supply	Red

FIELDBUS CONTROL



WITH REMOTE-CONTROL



The remote-control version of the Regtronic has two diagnostic LEDs.

WITH DISPLAY



The display version also has buttons for entering the various parameters.

PROGRAMMABLE AND FLEXIBLE

Setting options:

- LANGUAGE
- UNIT OF MEASUREMENT
- TYPE OF INPUT
- TYPE OF DIGITAL OUTPUT
- DEAD-BAND
- FULL SCALE
- MINIMUM PRESSURE

PRECISION

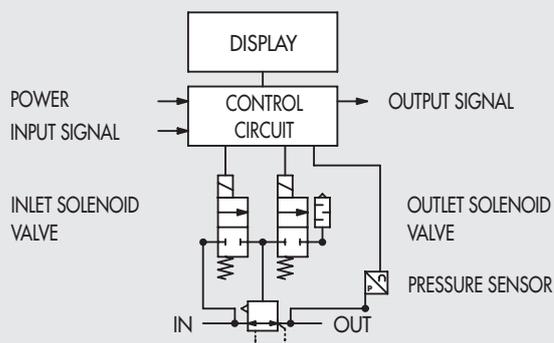
Linearity
± 0.5 % (full scale)

Hysteresis
± 0.2 % (full scale)

Repeatability
± 0.2 % (full scale)

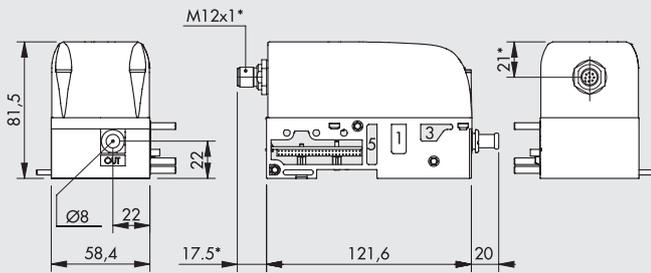
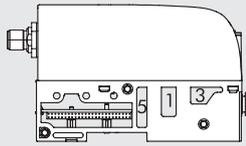
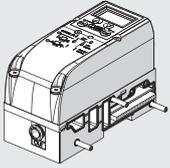
Sensitivity
range 10 to 300 mbar

FUNCTION DIAGRAM



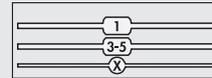
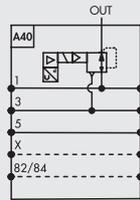
DIMENSIONS - ORDERING CODES

PROPORTIONAL PRESSURE REGULATOR

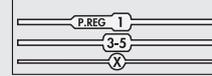
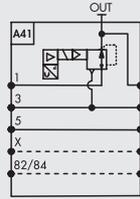


* For version with electrical analogue control only.

Symbol	Display	Code		Weight [g]
		with M12 connector	via fieldbus	
Bocche 1 passante	WITH	02282A400Z00	02282A401Z00	600
	WITHOUT	02282A400Z10	02282A401Z10	600



Port 1 sectioned	Display	Code		Weight [g]
		WITH	02282A410Z00	
WITHOUT	02282A410Z10	02282A411Z10	600	

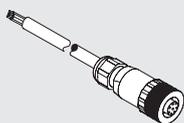


KEY TO CODES

02282	A4	0	1	Z	0	0
FAMILY	SUBSYSTEM	TYPE OF BASE	TYPE OF ELECTRICAL CONNECTION	SPECIALTY	DISPLAY	SPECIALTY
02282 EB 80	A4 Proportional pressure regulator	0 Base port 1 pass-through local outlet 1 Base port 1 sectioned in-series regulation	0 External electrical analogue control connector M12 1 Electrical control via fieldbus	Z Standard	0 With 1 Without	0 Standard

ACCESSORIES: ANALOG VERSION

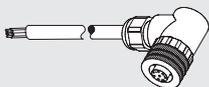
CONNECTOR M12x1, 8-PIN, A-CODED, FEMALE, STRAIGHT



Pin	Cable color
1	White
2	Brown
3	Green
4	Yellow
5	Grey
6	Pink
7	Blue
8	Red

Code	Description
W0970513010	Connector M12x1, 8-pin, A-coded, female, straight, with cable L = 5 m

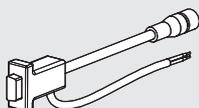
CONNECTOR M12x1, 8-PIN, A-CODED, FEMALE, 90°, WITH CABLE



Pin	Cable color
1	White
2	Brown
3	Green
4	Yellow
5	Grey
6	Pink
7	Blue
8	Red

Code	Description
W0970513011	Connector M12x1, 8-pin, A-coded, female, 90°, with cable L = 5 m

CONFIGURATION CABLE



Code	Description
W0970513019	Configuration cable

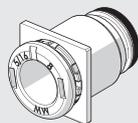
The cable consists of:

- M12 8-PIN female connector to be connected to regulator
- RS232 serial connector to be connected to PC
- 2 wires to supply 24VDC power

The package also includes a RS232-USB adapter

SPARE PARTS

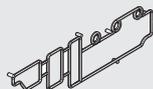
CARTRIDGE



Code	Description	Ø
02282R2001	EB 80 Ø 4 base square cartridge kit	4 (5/32")
02282R2002	EB 80 Ø 6 base square cartridge kit	6
02282R2003	EB 80 Ø 8 base square cartridge kit	8 (5/16")
02282R2006	EB 80 Ø 1/4 base square cartridge kit	1/4"

Comes in 10-pc. packs

BASE INTERFACE GASKET



Code	Description
02282R1000	EB 80 base interface gasket kit

Comes in 10-pc. packs

NOTES